

AMENDMENTS TO THE CLAIMS

1. (currently amended) A spreader roll for web processing machines of the type used in the paper, textile and plastics industry, for use on a web of material to be splayed, the spreader roll comprising:

a bowed shaft;

a bowed cylindrical outer surface comprising a plurality of cylindrical elements axially aligned along said shaft, each of said elements having an outer surface and at least one end portion having a nonlinear profile; and

whereby the splayed web is intermittently supported by at least one of said plurality of cylindrical elements at said nonlinear profile.

2. (original) The spreader roll of claim 1 wherein said non-linear profile of adjacent ones of said cylinder elements are arranged in mating relationship.

3. (original) The spreader roll of claim 2 wherein said non-linear profile defines a generally sine wave configuration.

4. (original) The spreader roll of claim 3 wherein said sine wave configuration includes flattened areas.

5. (original) The spreader roll of claim 3 wherein said sine wave configuration includes tessellated, partially mosaic flattened areas.

6. (currently amended) In a spreader roll including a bowed shaft, a bowed cylindrical outer surface mounted for rotation about said shaft, said bowed cylindrical outer surface being comprised of a plurality of interconnected cylinder elements, each of said cylinder elements including an outer surface and oppositely disposed end portions, the improvement wherein at least one of said oppositely end portions has a nonlinear profile for intermittently supporting a splayed web of material at said nonlinear profile.

7. (original) The spreader roll of claim 6 wherein said nonlinear profile defines a sine wave configuration.

8. (original) The spreader roll of claim 7 wherein said sine wave configuration includes flattened areas.

9. (original) The spreader roll of claim 8 wherein said sine wave configuration includes tessellated, partially mosaic flattened areas.

10. (currently amended) A spreader roll for web processing machines of the type used in the paper, textile and plastics industry for use on a web of material to be splayed, the spreader roll comprising

a bowed shaft;

a plurality of roll segments, said roll segments being bowed and rotatably supported on said shaft; ~~and~~

each said segment having at least one non-linear end edge profile; and

whereby the splayed web is intermittently supported by at least one of said plurality of cylindrical elements at said nonlinear profile.

11. (original) The spreader roll of claim 10 wherein said non-linear end edge profiles are arranged to intermesh with adjacent roll segments.

12. (original) The spreader roll of claim 10 wherein said non-linear end edge profile is substantially sinusoidal.

13. (original) The spreader roll of claim 12 wherein the substantially sinusoidal edge profile includes at least one flattened area.

14. (original) The spreader roll of claim 12 wherein the substantially sinusoidal edge profile includes tessellated, partially mosaic flattened areas.

15. (currently amended) A spreader roll for web processing machines of the type used in the paper, textile and plastics industry for use on a web of material to be splayed, the spreader roll comprising

a bowed shaft;

a bowed cylindrical outer surface comprising a plurality of cylindrical roll segments axially aligned and rotatably supported on said shaft; ~~and~~

each said segment having a sinusoidal end edge profile; and

whereby the splayed web is intermittently supported by at least one of said plurality of cylindrical elements at said nonlinear profile.

16. (original) The spreader roll of claim 15 wherein said non-linear end edge profiles are arranged to interlock with adjacent roll segments.

17. (original) The spreader roll of claim 15 wherein each said sinusoidal end edge profile includes at least one flattened area.

18. (original) The spreader roll of claim 15 wherein each said sinusoidal end edge profile includes tessellated, partially mosaic flattened areas.
